

SUDDEN OAK DEATH

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The first positive sample of Sudden Oak Death (SOD) (*Phytophthora ramorum*) was confirmed in central coastal California in the summer of 2000. This previously unknown pathogen has caused dieback since 1995 of several oak species in 12 California counties, which were placed under "Regulated County Status." The most lethal result is trunk cankers, which eventually girdle and kill the trees. Other symptoms manifest themselves on the leaves and twigs, but generally do not kill the host.

Mortality is most often associated with oaks, especially southern and northern red oaks. The fungus spreads by air, soil, water, and root transportation. This fungus grows much faster in humid conditions, which is why there is so much concern with keeping it out of the Southeast.

The spread of SOD in the past three years has largely been kept in check to California, Oregon, and Washington locations. However, camellias infected with SOD were found in a nursery, Monrovia Growers (Azusa, Los Angeles County), which is one of the largest commercial

nurseries in the country. They shipped host material to over 1,700 nurseries in as many as 40 states. Another mail order nursery, Specialty Plants, Inc., also shipped 3,500 suspected plants from the San Marcos area. Since the discovery, all positively sampled nurseries have agreed to not ship host or associated host plants. States have placed "Emergency Rule - Stop Sale Orders" for anyone receiving plants from infected nurseries. Furthermore, all shipped materials are being collected and destroyed where possible. Alabama received 2,002 of these plants.

The Eastern Region of the US has 37 establishments that tested 76 positive samples. There were 406 nurseries that received 30,803 host plants from Monrovia. Approximately 28,026 plants were destroyed and 2,291 samples taken for DNA testing. Approximately 321 nurseries have been released.

Because SOD is a regulated pest, the USDA Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine Section, has the lead responsibility for its detection and treat-

ment at the federal level. State departments of agriculture have the responsibility at the state level. The USDA Forest Service and state forestry agencies typically become more involved when the problem affects forested areas. Because this is a relatively new pest, national standards were recently developed entitled, "*Early Detection and Rapid Response Protocol for Forest and Landscape Environments with Plants Infected with Phytophthora ramorum.*" This protocol sets standards for all activities associated with the pest. While this

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Several years after onset of infection, rapid browning and death of all leaves occurs in some oak trees infected with *P. ramorum* canker disease.

Summer 2004



Intervein leaf lesions on buckeye due to Sudden Oak Death (*P. ramorum*).



Leaf lesions due to Sudden Oak Death (*P. ramorum*) on Camellia japonica variety Silver Waves.

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Sudden Oak Death

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Courtesy of Plant Health Progress



Sudden Oak Death (P. ramorum canker) on coast live oak. Outer bark shows rust-colored seepage.

protocol is very detailed, here are a few key points.

Suspect positives detected outside regulated areas and more than 25 miles from a generally infested area will trigger state action and federal notification.

APHIS or state agencies will put a hold on further shipments/sales by issuing an "Emergency Rule - Stop Sales Order" until test results are completed. The Alabama Department of Agriculture and Industries issued an emergency rule on March 24, 2004.

A positive confirmed detection will trigger the collecting, DNA sampling, and destroying of all infected host-plant material. Eradication measures require the removal and destruction of all affected host material and all host plants in a surrounding buffer zone of 100 feet. In forest settings, stumps should be treated with a chorine bleach mixture. Monitoring will be conducted for three consecutive years.

In areas where the host range is unknown, a delimitation survey will be conducted. A quarter-mile buffer will be surveyed where host plants exist.

Equipment on site and within a quarter-mile buffer will be decontaminated prior to movement to other sites.

The lead state agency in Alabama in the handling of plants is the Alabama Department of Agriculture and Industries. The Division of Plant Industry is in charge of undertaking an intensive survey for SOD, which encompasses all nursery growers and nursery dealers within Alabama. There are 750 nursery growers and over 2,200 nursery dealers in the state.



To date, in Alabama, the Division of Plant Industry found three plants that were confirmed to be infected with SOD. These three confirmed plants and any host material within ten meters were doubled bagged and incinerated or carried to a Schedule D landfill and buried under the supervision of the Division of Plant Industry. Following the destruction of the plants, a sterilization of the area where the plants were located was conducted, including the interior and exterior of the nursery and the soil under which the plants had been harbored.

All 13 southern states are involved with delimiting surveys. The USDA Forest Service is working with APHIS and Alabama to conduct surveys of high-hazard forests near SOD-infected nurseries. They have allocated approximately

\$4 million to detect and control the pest. The Office of Management and Budget (OMB) has also approved \$15.5 million for APHIS. See the accompanying SOD risk hazard map that the Forest Service published.

The Southern Research Station and the Forest Health Section of the Forest Service are conducting the southern survey. Mississippi State University is under a contract with the Forest Service to survey forested areas adjacent to suspect nurseries and locations where infected plants were delivered in Alabama. The USDA Center for Plant Health Science and Technology and Mississippi Forestry Lab test DNA for positive samples. So far they have not found any further infestations of SOD.

The Alabama Department of Agriculture and Industries has taken a very aggressive approach to SOD, and with the support of the Alabama Nurserymen's commitment to excellence, it is safeguarding against infestation of SOD and other exotic pests.

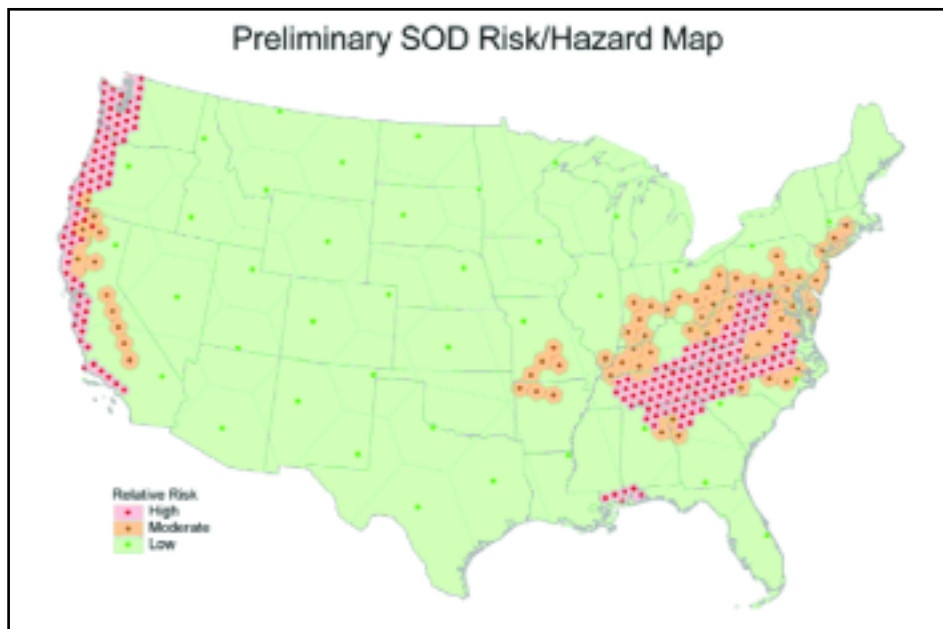
Next year, the plan is for the nurseries and the surrounding forests to again be surveyed. The Division of Plant Industry will handle the nurseries and the Forest Service will contract with either the Alabama Forestry Commission or Mississippi State University to handle the forest survey.

Additional information can be found on the following websites:

www.suddenoakdeath.org

www.aphis.usda.gov/ppq/ispm/sod

<http://www.na.fs.fed.us/spfo/fhm> 📄



Courtesy of Plant Health Progress